# Identification of clinical phenotypes according to peripheral musculoskeletal manifestations in patients with spondyloarthritis, including psoriatic arthritis: a cluster analysis in the worldwide ASAS-PerSpA study. 

## Supplementary material

Supplementary Figure S1. Multiple Correspondence Analysis with regard to the location of all the peripheral manifestations.


Categories that end in 1 or 0 : presence or absence.
MCA: Multiple correspondence analysis
Peripheral joint disease: A: Ankle; AC: acromioclavicular joint; DIPh: distal interphalangeal joint of the hand; DIP_PIP: distal interphalangeal or proximal interphalangeal joint of the feet; E: Elbow; H : hip; K: Knee; MCP: metacarpophalangeal; MT: midtarsal; MTP: metatarsophalangeal; PIPh: proximal interphalangeal joint of the hand; S: Shoulder; SC: sternoclavicular joint; TM: temporomandibular joint; W: wrist
For MCP, PIPh and DIPh: the specific location of the finger is indicated (1 to 5)
For MTP and DIPorPIPf: the specific location of the toe is indicated (1 to 5)
Enthesitis: ASIS: Anterior superior iliac spines; AT: Achilles tendon; CS: Chondrosternal; CSP: cervical spinous processes; HT: humeral tuberosity; IC: iliac crests; IT: ischial tuberosities; LCF: lateral condyle of the femur; LCH: lateral condyle of the humerus; LSP: lumbar spinous processes; MCH : medial condyle of the humerus; MCF: medial condyle of the femur; MS: manubriosternal; NC: nuchal crests; PF: plantar fascia; PSIS: posterior superior iliac processes; QP: quadriceps insertion on the superior border of patella; TF: greater trochanter of the femur; TSP: Thoracic spinous processes; TT: tibial tubercle
Dactylitis: F: Finger; T: Toe.
For fingers and toes: the specific location of the finger or toe is indicated (1 to 5)

Supplementary Figure S2. Multiple Correspondence Analysis with regard to the location of arthritis.


Categories that end in 1 or 0 : presence or absence.
MCA: Multiple correspondence analysis
A: Ankle; AC: acromioclavicular joint; DIPh: distal interphalangeal joint of the hand; DIP_PIP: distal interphalangeal or proximal interphalangeal joint of the feet; E: Elbow; H: hip; K: Knee; MCP: metacarpophalangeal; MT: midtarsal; MTP: metatarsophalangeal; PIPh: proximal interphalangeal joint of the hand; S: Shoulder; SC: sternoclavicular joint; TM: temporomandibular joint; W: wrist
For MCP, PIPh and DIPh: the specific location of the finger is indicated (1 to 5)
For MTP and DIPorPIPf: the specific location of the toe is indicated (1 to 5 )

Supplementary Figure S3. Multiple Correspondence Analysis with regard to the location of enthesitis.


ASIS: Anterior superior iliac spines; AT: Achilles tendon; CS: Chondrosternal; CSP: cervical spinous processes; HT: humeral tuberosity; IC: iliac crests; IT: ischial tuberosities; LCF: lateral condyle of the femur; LCH: lateral condyle of the humerus; LSP: lumbar spinous processes; MCH: medial condyle of the humerus; MCF: medial condyle of the femur; MS: manubriosternal; NC: nuchal crests; PF: plantar fascia; PSIS: posterior superior iliac processes; QP: quadriceps insertion on the superior border of patella; TF: greater trochanter of the femur; TSP: Thoracic spinous processes; TT: tibial tubercle

Supplementary Figure S4. Multiple Correspondence Analysis with regard to the location of dactylitis.


F: Finger; $T$ : Toe.
For fingers and toes: the specific location of the finger or toe is indicated (1 to 5)

Supplementary Table S1. Distribution of clusters across geographical regions.

|  | Latin America $N=538$ | Europe and North America $N=1677$ | $\begin{gathered} \text { Asia } \\ \mathrm{N}=975 \end{gathered}$ | Middle East and North Africa $\mathrm{N}=1275$ |
| :---: | :---: | :---: | :---: | :---: |
| Clusters with regard to the location of all the peripheral musculoskeletal manifestations |  |  |  |  |
| Cluster 1 | 425 (79.0\%) | 1513 (90.2\%) | 867 (88.9\%) | 1179 (92.5\%) |
| Cluster 2 | 113 (21.0\%) | 164 (9.8\%) | 108 (11.1\%) | 96 (7.5\%) |
| Clusters with regard to the location of the arthritis |  |  |  |  |
| Cluster 1 | 402 (74.7\%) | 1436 (85.6\%) | 846 (86.8\%) | 1146 (89.9\%) |
| Cluster 2 | 27 (5.0\%) | 37 (2.2\%) | 33 (3.4\%) | 18 (1.4\%) |
| Cluster 3 | 109 (20.3\%) | 204 (12.2\%) | 96 (9.8\%) | 111 (8.7\%) |
| Clusters with regard to the location of the enthesitis |  |  |  |  |
| Cluster 1 | 420 (78.1\%) | 1592 (94.9\%) | 901 (92.4\%) | 1176 (92.2\%) |
| Cluster 2 | 88 (16.3\%) | 56 (3.4\%) | 46 (4.7\%) | 66 (5.2\%) |
| Cluster 3 | 30 (5.6\%) | 29 (1.7\%) | 28 (2.9\%) | 33 (2.6\%) |
| Clusters with regard to the location of the dactylitis |  |  |  |  |
| Cluster 1 | 510 (94.8\%) | 1628 (97.1\%) | 907 (93.0\%) | 1246 (97.7\%) |
| Cluster 2 | 27 (5.0\%) | 45 (2.7\%) | 43 (4.4\%) | 25 (2.0\%) |
| Cluster 3 | 1 (0.2\%) | 4 (2.4\%) | 25 (2.6\%) | 4 (0.3\%) |

